REMARKS

Claims 1-12 remain pending in the application.

Allowed Claims 3-4

The Applicants thank the Examiner for the indication that claims 3 and 4 are allowed.

Claims 1, 2 and 5-12 over Lee in view of Bohnke

In the Office Action, claims 1, 2 and 5-12 were rejected under 35 U.S.C. §103(a) as allegedly being obvious over U.S. Pat. No. 6,341,140 to Lee et al. ("Lee") in view of U.S. Pat. No. 5,652,772 to Isaksson et al. ("Isaksson"). The Applicants respectfully traverse the rejection.

Claims 1, 2, 5 and 6 recite a frame sync signal generator including a bandpass filter adapted to remove a portion **but not all** of a signal corresponding to at least one digital channel from a received OFDM signal. Claims 7-12 recite filtering out a portion **but not all** of a signal corresponding to at least one digital channel from said received OFDM signal to provide a bandpass filtered OFDM signal.

The invention discloses a technique of finding a frame sync signal that takes advantage of the redundancy provided in an OFDM signal that has two digital copies of the same signal (portions A and B in Fig. 2). While the invention sacrifices much of the redundancy, it gains greatly in avoidance of issues relating to interference. According to the invention, the lower frequency portion (e.g., about half) of the first digital signal A is filtered out, and the upper frequency portion (e.g., about half) of the second digital copy B is filtered out. (See, e.g., Fig. 3 of the application). The resultant signal is combined, effectively resulting in a whole signal for the purposes of detecting the frame sync. It is important to realize that the present invention filters a portion **but not all** of a digital signal, e.g., as seen in Fig. 3.

The Examiner cites Lee as allegedly teaching a bandpass filter 21-1 in its Fig. 2, to "remove a portion of a signal corresponding to at least one digital channel from a received OFDM signal. (Office Action at 2).

Lee quite clearly filters an ENTIRE signal. Lee discloses that the received signals are input to m bandpass filters 21-1 to 21-m in which the center frequency of each bandpass filter is positioned at the corresponding carrier frequency. (Lee, col. 3, lines 27-29) The bandwidth of the bandpass filters 21-1 to 21-m is set to the range to the extent to pass only the bandwidth of each carrier so as to detect the strength of the signal received at each frequency. (Lee, col. 3, lines 30-33)

The Examiner additionally cites Isaksson for allegedly teaching cyclic extension in an OFDM environment. In any even, Isaksson fails to cure the significant deficiency in Lee, i.e., that it teaches the filtering of an entire digital signal.

Neither Lee nor Isaksson, either alone or in combination, disclose, teach or suggest a frame sync signal generator, much less filtering to remove a portion **but not all** of a signal corresponding to at least one digital channel from a received OFDM signal, as variously recited in claims 1, 2, and 5-12.

Accordingly, for at least all the above reasons, claims 1, 2 and 5-12 are patentable over the prior art of record. It is therefore respectfully requested that the rejection be withdrawn.

Conclusion

All objections and rejections having been addressed, it is respectfully submitted that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,
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